

(FILE 'USPAT' ENTERED AT 08:38:28 ON 07 OCT 1998)

L1 2835 CDTE OR CADMIUM TELLURIDE  
 L2 111894 ARGON OR AR  
 L3 7564 L2(2A) (ION# OR ATOM#)  
 L4 27 L1(10A)L2  
 L5 14 L1(P)L3  
 L6 5 L1(10A)L3  
 L7 9 L5 NOT L6

=> d 16 1-5

1. 5,541,118, Jul. 30, 1996, Process for producing cadmium sulfide on a cadmium telluride surface; Dean H. Levi, et al., 438/94; 136/258, 260, 264; 257/614, 631; 427/76, 535, 569, 575; 438/86, 95 [IMAGE AVAILABLE]
2. 5,454,902, Oct. 3, 1995, Production of clean, well-ordered CdTe surfaces using laser ablation; Jennifer J. Zinck, et al., 438/797; 204/192.35; 216/65, 66; 219/121.61, 121.68, 121.69, 121.85; 252/79.1; 372/109; 438/940, 980 [IMAGE AVAILABLE]
3. 5,192,695, Mar. 9, 1993, Method of making an infrared detector; Cheng-Chi Wang, et al., 438/87; 148/DIG.31; 438/92, 936 [IMAGE AVAILABLE]
4. 5,123,995, Jun. 23, 1992, Low-temperature, photo-induced epitaxy; Charter D. Stinespring, et al., 117/94, 92, 103, 104, 904, 923, 953, 956; 438/492, 503 [IMAGE AVAILABLE]
5. 4,445,965, May 1, 1984, Method for making thin film cadmium telluride and related semiconductors for solar cells; Arthur G. Milnes, 438/95; 117/84, 101, 106, 109, 915, 928, 956, 958; 136/260; 148/DIG.135; 204/192.25; 430/314; 438/507, 940 [IMAGE AVAILABLE]

=> d 17 4

4. 5,009,743, Apr. 23, 1991, Chemically-assisted ion beam milling system for the preparation of transmission electron microscope specimens; Peter R. Swann, 216/66; 156/345; 204/192.34, 192.35, 298.36 [IMAGE AVAILABLE]

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L9: 2 of 2

RADIATION DETECTOR AND MANUFACTURE THEREOF

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ABSTRACT:

PURPOSE: To obtain a multichannel type radiation detector having excellent isolation characteristics among each element by alternately forming chemical etching layer sections and electrode sections having Schottky-barrier junction characteristics to the surface of a crystalline substrate.

CONSTITUTION: Structure in which electrode sections (d) for Schottky-barrier junctions and chemical etching sections (c) are shaped alternately to the surface of a P type **CdTe** crystalline substrate (b) is formed. The structure is shaped in such a manner that masks (a) with slits are arranged onto the chemically etched crystalline substrate (b), and the chemical etching layers (c) in the crystalline substrate (b) corresponding to slit sections are removed through **argon-ion** sputtering from the direction A. The electrodes (d) having thin-film Schottky-barrier junctions consisting of Al, Pt, etc. are formed to the removed layers (c) through a vacuum deposition method. The surface layers left as they are chemically etched are left among each element (among the electrodes (d)) at that time. An ohmic electrode (e) is shaped onto another surface through a method such as an electroless plating method with a chlorine compound of an Au thin-film.